

**To:** Sandoval, Joni[Sandoval.Joni@epa.gov]; McComb, Martin[McComb.Martin@epa.gov]  
**From:** Cristiano, Gina  
**Sent:** Sun 8/9/2015 5:16:04 AM  
**Subject:** Fwd: Gold King Mine Realease - Region 9 Update 2

FYI...might be good to listen in if you can...DO got this but he may not see it.

Sent from my iPhone

Begin forwarded message:

**From:** "Cristiano, Gina" <Cristiano.Gina@epa.gov>  
**Date:** August 8, 2015 at 10:52:03 PM MDT  
**To:** "Allen, HarryL" <Allen.HarryL@epa.gov>  
**Subject:** Re: Gold King Mine Realease - Region 9 Update 2

Thanks Harry!!

Sent from my iPhone

On Aug 8, 2015, at 10:50 PM, Allen, HarryL <Allen.HarryL@epa.gov> wrote:

Please be advised that Region 9 will send daily written updates to this notification list on EPA activities, highlighting new information each day. Also, Region 9 will host a daily Navajo Nation coordination call at 4pm Navajo Time (3PM PDT) - *Next Call Monday 8/10* - Please join us. The call in number is:

Nonresponsive Conference Code

## **Background**

On August 5, 2015, EPA was conducting an investigation of the Gold King Mine, north of Silverton, CO. The intent of the investigation was to assess the on-going water releases from the mine, to treat mine water, and to assess the feasibility of future mine remediation. The plan was to excavate the loose material that had collapsed into the cave entry back to the timbering. During the excavation, the loose material gave way, opening the adit (mine tunnel) and spilling the water stored behind the collapsed material into Cement Creek, a tributary of the Animas River. Initial

estimates are that the release consisted of approximately one million gallons of water (estimated from the dimensions of the mine adit) that was held behind unconsolidated debris near an abandoned mine portal. There were several workers at the site at the time of the breach, all were unharmed.

The first two days after the incident, the plume was moving at approximately 4 miles per hour. According to the EPA's flyover, as of the morning of Aug 8th, the plume had reached the confluence of the San Juan River. As of 4:00 pm this afternoon, the plume had roughly reached Kirtland, New Mexico. The plume has been visually diluted and the leading edge of it is far less defined. The water is reported to be muddy with an orange tinge rather than solid orange.

Sampling data from Cement Creek and the Animas River near Silverton from Aug. 5th and 6th show pH and metals concentrations are decreasing to pre-event conditions. We continue to monitor river conditions at multiple locations to detect trends. Rain events and variations in stream flows can cause the pH and metals concentrations to rise and fall.

The data shows that pH (acidity) levels and dissolved metals in the Cement Creek and the upper portions of the Animas River spiked in the surface water at locations impacted by the contaminant plume. The data shows in the upstream locations the resident time of the plume in any one location was not long lasting. The trend downstream, in the Animas and San Juan Rivers, is expected to be similar or better than upstream, as the contaminant plume passes.

Colorado Parks and Wildlife (CPW) officials have been monitoring the effects of the spill on terrestrial and aquatic wildlife since the incident began. CPW is watching for any impacts on wildlife, whether they are acute or chronic. Fish are especially sensitive to changes in water quality. CPW is also monitoring a control station on a clean tributary.

Colorado Parks and Wildlife has indicated they are optimistic that the effects of the spill on terrestrial wildlife will be minimal.

The water in Cement Creek and the Animas River in Silverton is clearing. The adit is still discharging approximately 500 gallons per minute and the trend is that flow is decreasing. The discharge is being diverted into the newly constructed ponds and treated before it enters Cement Creek. The treatment appears to be effective.

A summary of pH and dissolved metals data is available here:

<http://epaossc.org/goldkingmine>

## NEXT STEPS

- Continue to treat drainage at mine site.
- Continue to sample the Animas River corridor
- Evaluate and publish data as it is finalized.
- Continue coordination with State, Federal, Tribal and local officials as well as community members, landowners/ water users.
- Continue to provide drinking water and water testing to private well owners.

Site information, maps and sampling data are all available at:

[http://www.epaossc.org/site/site\\_profile.aspx?site\\_id=11082](http://www.epaossc.org/site/site_profile.aspx?site_id=11082). Please request a password to view the geospatial viewer for an interactive map accessed through the webpage.

## **EPA Region 9 Activities**

The discharge has moved quickly and is in the vicinity of the Navajo Nation boundary, near Kirtland, NM. Navajo officials have reacted quickly, assessing their well fields and drinking and irrigation water intake systems and issuing a precautionary "do not use" public service announcement regarding water from potentially impacted sources. Region 9 held a conference call today with Navajo Nation EPA (NNEPA) and Navajo Department of Public Safety.

The Navajo EPA surface water monitoring program (Shiprock Office) collected water and sediment samples from the San Juan River yesterday - prior to the spill impact. Region 9 provided 2 START contractors and has requested 2 additional personnel to coordinate and conduct increased sample collection and lab analysis in conjunction with NNEPA. A Region 9 OSC will report to Farmington on Monday to assist. A joint EPA/NNEPA river sampling program has commenced focusing on the San Juan between Shiprock/Hogback, NM area and Mexican Hat, UT and will continue for the foreseeable future. NNEPA also requested drinking water sampling support immediately for Navajo operated water intakes. NNEPA and USEPA drinking water experts agreed to inventory and assess water sources including private wells and intakes.

Two Community Involvement Coordinators (CICs) will deploy to Farmington on Sunday. The CICs will plan to meet with local Navajo Chapter officials and prepare to host public meetings in the coming days. The CICs will partner with NNEPA and NN Department of Public Safety to ensure comprehensive outreach to all affected Navajo Chapters.

Region 9 has deployed an On Scene Coordinator (OSC) to the Durango

Incident Command Post to coordinate Navajo field activity updates and results with Region 8 and ensure command messages get back to Navajo officials. The Region has also deployed a Public Information Officer (PIO) to participate in a Joint Information Center (JIC), presently in Durango, with and other the affected Federal, State, County and Tribal agencies.

OSC Robert Wise (Durango): 562-889-2572

PIO Rusty Harris-Bishop (Durango): 415-694-8840

OSC Randy Nattis (SF to Farmington 8/10): 415-940-1108

Harry Allen, Section Chief (Sit Report): 415-218-7406